

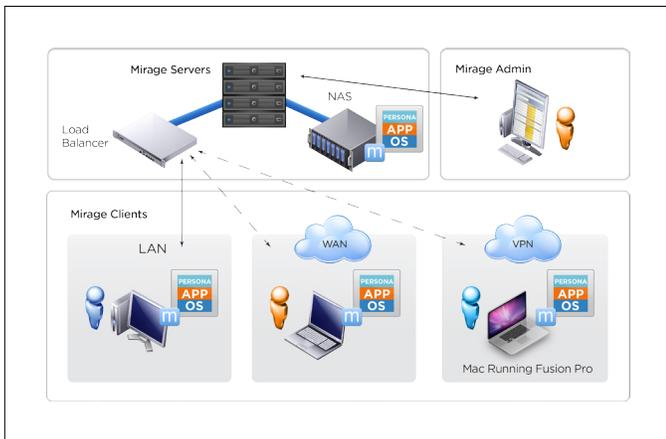
# VMware Mirage

## AT A GLANCE

VMware® Mirage™ provides unified image management for physical desktops, virtual desktops, and BYO devices. Dynamic layering and full system recovery ensure that IT can quickly and cost-effectively deliver, manage, and protect updates to operating systems and applications across tens of thousands of endpoints. Designed for distributed environments, Mirage requires little to minimal infrastructure at branch sites and, therefore, drives down capital expenditures. Mirage also complements and extends PC Lifecycle Management tools to drive down IT helpdesk and support costs.

## BENEFITS

- Simplify management of physical or virtual desktops by transforming them into centralized, layered images.
- Drive down costs with single image management, automated backup, and full system recovery.
- Improve workplace productivity by empowering each end user with a personalized and adaptive desktop experience.



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## Manage Unified Images with Dynamic Layering

VMware Mirage allows IT to manage images across physical desktops, virtual desktops, and BYO PCs. Dynamic layering simplifies OS and application rollouts. With Mirage, devices are separated into logical layers that can be controlled by IT or end users. IT can streamline OS and application layer updates, and end users can maintain their personalized settings. This flexible endpoint management technique enables quick OS updates and migrations, application upgrades, and hardware upgrades.

## Accelerate Windows 7 and Windows 8.1 Migrations

VMware Mirage accelerates the most common approaches to Windows 7 and 8.1 migrations: upgrading an existing Windows XP device to Windows 7, upgrading an existing Windows 7 device to Windows 8.1, or migrating an end user's profile and files to a new Windows 7 or 8.1 machine. In addition, Mirage takes a full snapshot of the Windows XP or Windows 7 system before it attempts a migration. If something goes wrong, IT can quickly restore the end user to the previous well-known state.

These enhancements allow organizations to save time and money when they migrate to a new operating system. In the case of a 5,000-person organization, these savings could add up to roughly USD \$600,000 in IT time and more than USD \$1,000,000 in user productivity gains.

## Automate PC Backup and Full System Recovery

Whether you need to reimage a desktop, replace a broken hard drive, replace a lost or damaged PC, or roll back a malfunctioning PC to a previously working snapshot, restoring the desktop can be difficult. VMware Mirage takes snapshots of an entire PC—including OS, applications, files and personalization—and restores an exact image of the end user's old system to any replacement device. Self-service file recovery and "follow-me" access to files across devices additionally enhances end-user productivity.

## Easily Manage Remote and Branch Office PCs Without Added Infrastructure

VMware Mirage was designed to excel over the WAN by leveraging de-duplication capabilities, both in storage and during network transfers. This gives IT a powerful tool for managing laptops and desktops used by remote offices, home workers and traveling employees. VMware Mirage centralizes exact copies of these endpoint PCs over the WAN and into the data center.

## Extend PC Lifecycle Management Tools

Mirage augments any PCLM tool and gives IT a streamlined way to extend their investments. PCLM tools can be complemented by the dynamic layering benefits, backup and recovery, and rollback options of Mirage. By extending PCLM, Mirage helps to lower helpdesk support costs, improve backup and recovery, and simplify mass OS deployments.

## What Is VMware Mirage?

When Mirage is installed on a PC or virtual desktop, it scans the entire device and categorizes all of its contents into a number of logical layers. Mirage doesn't move anything around on the PC or virtual desktop. It just categorizes the data, so that your IT staff can perform more granular management of the endpoint.

Mirage then sends a complete copy of that endpoint image to the Mirage Server, which resides in the data center and keeps it synchronized. If an end user goes offline, Mirage performs a synchronization the next time that user comes back online. That synchronization includes the updates IT has made to the IT-managed layers, as well as changes that the end user has made to the system. Images managed by VMware Mirage can run directly on a desktop or laptop—or inside a virtual machine with VMware Fusion® Professional or VMware® Horizon™. End users can leverage local compute power, such as CPU or graphics, whether they are online or offline.

The Mirage architecture includes the Mirage Server in the data center to centralize endpoints for management and protection, the Mirage Client to create a local cache for an optimal user experience at the endpoint, and advanced WAN designed technology to speed bidirectional synchronization over the WAN.

## Features and Benefits

### Simplified Desktop Management

#### Dynamic Layering

##### Layered Image Management

Manage your endpoint image as a set of logical layers owned by either your IT organization or the end user. Update IT-managed layers while maintaining end-user files and personalization. In the event an endpoint malfunctions, IT can restore the system layers on the endpoint to fix an issue without compromising user applications and data. Extend existing management processes and solutions for the PC life cycle to quickly migrate a user from an old PC to a new PC without losing any end-user data or personalization.

##### Layered Application Management

Easily deploy individual applications or groups of applications—or VMware ThinApp® packaged applications—to any collection of end users by leveraging VMware Mirage managed-application layering. Applications common to a certain team can be grouped into a single application layer and applied to all of the endpoints for a group of employees.

### Image Management for Virtual Desktops

Manage virtual desktops in your Horizon environment using VMware Mirage. Install and update Mirage layers to full clone VMs in persistent desktop pools, just as you would with physical PCs. This includes updating applications, OS patches, and base images. Managing virtual desktop images with VMware Mirage also allows updates to applications without affecting user-installed applications and data. IT can effectively use Mirage to manage both physical and virtual endpoints at scale.

### Image Management for BYO PCs

Provision centrally managed Mirage images to physical Windows desktops and laptops, or support “bring your own computer” initiatives by delivering IT-managed images to virtual machines.

### Full Desktop Backup and Recovery

Full PC snapshots and ongoing synchronization of changes in the datacenter ensure quick desktop recovery. By quickly restoring the system to a new device, IT can minimize end-user downtime when a PC is lost, stolen, or damaged. The VMware Mirage file portal also enables end users to access any file on their endpoint from any Web browser and users can also restore any file or directory with a few clicks in a self-service manner.

### Optimized for Remote and Branch Office Users

Optimize branch office management by enabling any Mirage client endpoint to be a branch reflector. A Mirage branch reflector allows you to download any updates once from the Mirage server, followed by peer-to-peer updates to other Mirage clients in the branch office. Advanced algorithms ensure that only required data is sent between the Mirage server and Mirage clients in a remote location or office. Mirage is designed to support up to 1,500 end users per Mirage server, and it can easily scale up to 10s of thousands of devices per server cluster, with minimal infrastructure.

### Empowering End-User Productivity Across Boundaries

#### Personalized Performance

Enable end users to leverage their local computing resources to maintain offline productivity. Images managed by VMware Mirage install natively onto Windows desktops and laptops—or as virtual desktops in Fusion Professional running on Windows, Mac, or Linux systems. IT has the ability to manage a diverse set of Windows operating systems, including Windows 8.1. Image layering gives end users the flexibility to personalize their systems.

#### Optimized and Adaptive Experience

The Mirage client monitors the resources being used on an end user's PC to ensure that the backup and synchronization processes never interfere with user productivity. Mirage dynamically adjusts CPU, RAM and network usage as needed to guarantee a seamless end-user experience.

## Find Out More

For information or to purchase VMware products, call 877-4-VMWARE (outside North America, +1-650-427-5000), visit <http://www.vmware.com/products> or search online for an authorized reseller. For detailed product specifications and system requirements, refer to the VMware Mirage documentation.

